UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,198	07/14/2006	Dominic Beier	20794/0204434-US0	7612

7278 7590 03/18/2010

DARBY & DARBY P.C.
P.O. BOX 770
Church Street Station
New York, NY 10008-0770

EXAMINER	
PAIK, SANG YEOP	
ART UNIT	**PAPER NUMBER**
3742	
MAIL DATE	**DELIVERY MODE**
03/18/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/597,198	BEIER ET AL.	
	Examiner	Art Unit	
	SANG Y. PAIK	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 December 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-34 and 37-44* is/are rejected.

7)☒ Claim(s) *35 and 36* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 December 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/14/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 21-23, 25-27, 29-34 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berkan et al (US 6,169,486) in view of Berkan et al (6,140,617).

Berkan '486 shows the structure and method claimed including a cooktop made of glass ceramic having an upper surface and a lower surface, a heating device disposed beneath the cooktop and heating the cooktop with an utensil supported on the upper surface, a first sensor 24' and a second sensor 24" wherein the first sensor measures a first wavelength indicative of the heat or radiation flow emanating from the upper surface of the cooktop and the second sensor for measuring a second wavelength that is different from the first wavelength and for indicating the heat radiation flow emanating from the lower surface of the cooktop, and the temperature signals are supplied and calculated by an electrical control system to provide a controlled heat output to achieved a desired cooktop temperatures, but Berkan '486 does not explicitly show comparing the measured and stored signals.

Berkan '617 shows a cooktop with a plurality of sensors wherein the thermal radations are measured and stored wherein a processor compares the received signals

to a stored data to produce a heat output from the energy source. Berkan ‘617 also shows an optical filter with a waveguide having a material such as alumina or glass that also forms the glass ceramic cooktop.

In view of Berkan ‘617, it would have been obvious to one of ordinary skill in the art to adapt Berkan ‘486 with the electrical system to compare the received signals with a stored data to produce a desired heat out to achieve a desired cooktop heating temperature.

With respect to the cooktop having the recited transmittances for the thermal radiation of the first and second wavelengths, it is noted that such transmittances relate as the inherent properties of the cooktop of the Berkan ‘167 or Berkan ‘486 references which has the same material or composition as that of the claimed cooktop, i.e, the cooktop being made of a glass ceramic.

3. Claims 24, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berkan ‘486 in view of Berkan ‘617 as applied to claims 21-23, 25-27, 29-34 and 38 above, and further in view of Ikeda (US 6,864,463).

Berkan ‘486 in view of Berkan ‘617 shows the structure claimed except a third sensor for measuring the emissivity of a bottom of the cooking utensil.

Ikeda shows that it is known in the art to provide a heat sensor that measures an emissivity of an object to determine its temperature.

In view of Ikeda, it would have been obvious to one of ordinary skill in the art to adapt Berkan '486, as modified by Berkan '617, with an emissivity sensor to measure an intended heating temperature to further modify the heating output of the heat source to

more accurately achieve the desired heating temperatures, and it would also have been obvious to allow the emissivity sensor calibrated to receive a third wavelength that is different from the second wavelength to measure the bottom of the utensil.

4. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berkan '486 in view of Berkan '617 as applied to claims 21-23, 25-27, 29-34 and 38 above, and further in view of Berkan et al (US 6,462,316).

Berkan '486 in view of Berkan '617 shows the structure claimed except the sensor to include a contact temperature sensor.

Berkan '316 shows that it is known to provide a contact temperature sensor to measure the cooktop heating temperature, and in view of Berkan '316, it would have been obvious to one of ordinary skill in the art to adapt Berkan '486, as modified by Berkan '617, with the sensor having a contact sensor which is known to provide an alternative sensor arrangement that can also adequately measuring the cooktop temperature.

5. Claims 37 and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berkan '486 in view of Berkan '617 as applied to claims 21-23, 25-27, 29-34 and 38 above, and further in view of Kobrich (US 6,118,107).

Berkan '486 in view of Berkan '617 shows the structure claimed except a deflector.

Kobrich shows a deflector such a mirror disposed in an optical path from a cooktop plate to a heat sensor. Kobrich also shows a coating provided on an upper surface of the plate.

In view of Kobrich, it would have been obvious to one of ordinary skill in the art to adapt Berkan '486 in view of Berkan '617 with a deflector to conveniently deflect an optical signal to a sensor that can be positioned in an arbitrary position, and it would have been obvious to further provide a coating to allow a reflective coating to allow an optical light to reflect in order to alternatively measure the heating temperature.

With respect to the coating having recited transmittance, reflectance, and absorptance, it is noted that such recitation relates as the inherent properties of the coating in Kobrich which has the same structure as that of the recited coating.

6. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berkan '486 in view of Berkan '617 as applied to claims 21-23, 25-27, 29-34 and 38 above, and further in view of Has et al (US 6,225,607).

Berkan '486 in view of Berkan '617 shows the structure claimed except a coating provided on a bottom of a cooking utensil.

Has shows that it is known in the art to provide a cooking utensil with a coating such as a black enamel which allows to improve the thermal radiation onto the cooking utensil, and Has further shows an electrical control system with a memory to store the cooking arrangement including the cooking utensil.

In view of Has, it would have been obvious to one of ordinary skill in the art to adapt Berkan '617, as modified by Berkan '617, to provide a cooking utensil with a coating thereon to improve the thermal radiation onto the utensil.

Allowable Subject Matter

7. Claims 35 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed 12/10/09 have been fully considered but they are not persuasive.

With respect to Berkcan ‘486, the applicant argues Berkan ‘486 teaches away from the use of a heat sensor measuring the radiation emitted from a cooktop plate and a utensil disposed thereon. This argument is not deemed persuasive since Berkcan ‘486 shows a sensor 24’ for measuring a heat flow D1 that is emanating from an upper surface of a cooktop where a utensil would be placed thereon. Berkcan ‘486 also shows another sensor for measuring the heat flow D2 from the bottom surface of the cooktop plate wherein the information received by the sensor 24". It is further noted that the these sensors are connected to a processing circuitry 38 to further calculate the difference of the received values to further control the cooktop temperature. Berkcan ‘486 further teaches that the temperature of the cooktop is reduced when it reaches a predetermined maximum. To determine when the temperature reaches a maximum, it would be need to be compared to a predetermined value. For such comparing, Berkcan '617 is applied wherein Berkcan '617 clearly teaches that received signal is compared with the stored data to further control the heating process (column 2, lines 9-30). Also, it

is noted that the filters shown in Berkcan '617 are provided to limit the interferences or noise but does not teach away how the sensors are applied to sense and measure the respective heating temperatures of the upper and lower cooktop.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SANG Y. PAIK whose telephone number is (571) 272-4783. The examiner can normally be reached on M-F (9:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on (571) 272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SANG Y PAIK/

Primary Examiner, Art Unit 3742